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(54) Title: EXPRESSION MONITORING FOR GENE FUNCTION IDENTIFICATION

(57) Abstract

This invention provides methods, compositions and apparatus for mapping the regulatory relationship among genes by massive parallel monitoring gene expression. In some embodiments, mutations in the up–stream regulatory genes are detected by monitoring the change in down–stream gene expression. Similarly, the function of a specific mutation in an up–stream gene is determined by monitoring the down–stream gene expression. In addition, regulatory function of a target gene can be determined by monitoring the expression of a large number of down–stream genes. The invention also provides specific embodiments for detecting p53 functional homozygous and heterozygous mutations and for determining the function of p53 mutations.

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